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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of

Docket No. 03280082US
(HO4-3826/KK)

Hiroatsu Toi, *et al.*

Confirmation No.: 5448

Serial No.: 10/669,810

Group Art Unit: No. 1743

Filed: September 25, 2003

Examiner: Natalia Levkovich

For: **MICROPLATE LIQUID HANDLING SYSTEM**

United States Patent and Trademark Office
Customer Service Window, Mail Stop Amendment
Randolph Building
401 Dulany Street
Alexandria, VA 22314

STATEMENT PURSUANT TO MPEP §713.04

Sir:

In a telephone interview of September 8, 2006, between Applicants' representative and Examiner Levkovich, claim 1 was discussed in view of the prior art of record, especially Nakano and Stylii. Applicants' representative explained that the prior art of record does not disclose two dispensing tip containers as claimed, to which the Examiner agreed to review again, if necessary. Further, proposed amendments to claim 1 were discussed to which the Examiner indicated that the proposed amendments would be allowable. A draft of the agreed proposed amendment was submitted to the Examiner later the same day for review.

On September 11, 2006, the Examiner contacted Applicants' representative to confirm that the amendment to claim 1 is allowable and that an Examiner's amendment would be permissible to place the application in condition for immediate allowance. An authorization to make the Examiner's amendment to claims 1 and 6 and to cancel the withdrawn claims was provided to the Examiner on September 12, 2006. A copy of the amended claims 1 and 6 (to make claim 6 consistent with claim 1) as provided to the Examiner on September 12, 2006 for the Examiner's Amendment, is presented below.

1. (Currently amended) A microplate liquid handling system comprising:
a main frame body;
a dispensing mechanism including a plurality of cylinders extending side by side and in parallel with each other by an even interval to provide a linear cylinder array, each cylinder having a nozzle and a plunger and a dispensing tip being attachable to each nozzle for performing suction and discharge of liquid reagent or specimen through the dispensing tips by way of each plunger, each dispensing tip being detachably connectable to each nozzle;
a moving mechanism supported to the main frame body for moving the dispensing mechanism in X-axis, Y-axis, and Z-axis directions directed perpendicular to each other;
a first dispensing tip container configured to contain a matrix of $n \times m$ dispensing tips for permitting the nozzles to be attached with a first dispensing tip array oriented in the Y-axis direction, the first dispensing tip container having a longitudinal axis in parallel with the Y-axis direction;
a second dispensing tip container configured to contain a matrix of $n \times m$ dispensing tips for permitting the nozzles to be attached with a second dispensing tip array oriented in the X-axis direction, the second dispensing tip container having a lateral axis in parallel with the X-axis direction;
a first reagent vessel having a plurality of wells oriented in the Y-axis direction for storing a first reagent to be supplied to the dispensing tips of the first dispensing tip container;
a second reagent vessel having a plurality of wells oriented in the X-axis direction for storing a second reagent to be supplied to the dispensing tips of the second dispensing tip container; and
a microplate arranged in the main frame body having a plurality of wells arranged in a matrix of $n \times m$, the first reagent being discharged in a plurality of wells oriented in the Y-axis direction and the second reagent being discharged in a plurality of wells oriented in the X-axis direction of the microplate;
a rotating mechanism that rotates the dispensing mechanism about a rotation axis located substantially at the center of the plurality of cylinders; and

a controller configured to control the dispensing mechanism, the rotating mechanism and the moving mechanism in the X-axis, Y-axis and Z-axis, and to rotate the rotating mechanism about the rotation axis to align the dispensing mechanism to permit the nozzles to be attached with dispensing tips oriented in the Y-axis direction or the X-axis direction, and to rotate the rotating mechanism about the rotation axis to align the dispensing mechanism in the Y-axis or X-axis direction to supply the first reagent or second reagent, respectively, to the attached dispensing tips.

6. (Currently amended) The microplate liquid handling system as claimed in claim 1, ~~further comprising a~~ wherein the rotating mechanism ~~that~~ rotates the dispensing mechanism by a predetermined angle about the ~~a vertically directed~~ rotation axis for changing a direction of the array of the plurality of cylinders.

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CONCLUSION

Applicants believe that the amendments presented herein overcome the prior art of record and places the application in immediate condition for allowance. Applicants believe that no extensions of time fees are due. However, if additional extensions of time are necessary to prevent abandonment of this application, then such extensions of time are hereby petitioned under 37 C.F.R. §1.136(a), and any fees required therefor are hereby authorized to be charged to our Deposit Account No. 23-1951.

Respectfully submitted,



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